

Name:

Date:

/50

%

**PART A** In the space on the left, write the letter of the term or phrase which **best** completes the statement or answers the question (1 mark each).

- \_\_\_\_ 1. The greenhouse gas nitrous oxide largely comes from ...  
a. Fossil fuels  
b. Fertilizers  
c. Cattle farming  
d. Aerosol cans
- \_\_\_\_ 2. Which of the following is not credited with affecting the global climate system?  
a. Deforestation  
b. Waste disposal  
c. Sediments  
d. Burning fossil fuels
- \_\_\_\_ 3. Chlorofluorocarbons are commonly used in ...  
a. Cars  
b. Landfills  
c. Fertilizers  
d. Refrigerators
- \_\_\_\_ 4. Which of the following is not a carbon sink?  
a. Forests  
b. Phytoplankton  
c. Weathering  
d. Oceans
- \_\_\_\_ 5. The ozone layer is important in filtering ...  
a. Solar radiation  
b. Thermal energy  
c. Infrared radiation  
d. Ultraviolet radiation
- \_\_\_\_ 6. Deforestation removes a valuable ...  
a. Carbon sink  
b. Fossil fuel  
c. Carbon contributor  
d. Carbon source

- \_\_\_ 7. Which of the following is a predicted effect of climate change in British Columbia?
- a. Increased flooding
  - b. Increased droughts
  - c. Rise in ocean levels
  - d. All of the above
- \_\_\_ 8. Salmon may find global warming troubling during migration due to ...
- a. Later run-off
  - b. Increased precipitation
  - c. Early run-off
  - d. Increased ice formation
- \_\_\_ 9. Greenhouse gases ...
- a. Reflect and store radiation as thermal energy
  - b. Absorb and trap radiation as thermal energy
  - c. Reflect and radiate radiation back into space
  - d. Absorb and radiate radiation back into space
- \_\_\_ 10. Which of the following would increase the CO<sub>2</sub> concentration in our atmosphere?
- a. Deforestation
  - b. Using energy from wind farms
  - c. Planting trees
  - d. Using solar powered vehicles

**PART B** In the space provided mark each of the following as true or false. (1 mark each)

- \_\_\_ 1. Cold water will rise above warmer water.
- \_\_\_ 2. Landfills produce CFCs which are a powerful greenhouse gas.
- \_\_\_ 3. Volcanic eruptions can cause the formation of sulfuric acid which reflects solar radiation.
- \_\_\_ 4. CFCs help to replenish the ozone layer.
- \_\_\_ 5. During a typical La Niña year, Western Canada can expect a colder, snowier winter.
- \_\_\_ 6. Aerosol cans are one of the largest sources of nitrous oxide.
- \_\_\_ 7. Scientists predict that the Arctic Ocean may be free of summer ice by 2050.
- \_\_\_ 8. Burning fossil fuels acts as a carbon sink.
- \_\_\_ 9. Global warming may lead to increased numbers of disease-carrying insects in Canada.
- \_\_\_ 10. The thermocline is a transition zone between the top layer of the ocean and the atmosphere.

**PART C** In the space provided, match each term or phrase with the best definition. (1 mark each)

- |                          |  |
|--------------------------|--|
| ___ 1. El Niño           | A. Gases that absorb and trap radiation as thermal energy.                   |
| ___ 2. Carbon sink       | B. An event that can bring unusually mild weather along the B.C. coast.      |
| ___ 3. Climate change    | C. CFCs breakdown this greenhouse gas.                                       |
| ___ 4. Methane           | D. An event that can bring increased hurricane formation in the Atlantic.    |
| ___ 5. Nitrous oxide     | E. Differences in long-term weather patterns in certain regions.             |
| ___ 6. La Niña           | F. This gas started to increase with the start of the Industrial Revolution. |
| ___ 7. Carbon dioxide    | G. They contribute CO <sub>2</sub> to the atmosphere.                        |
| ___ 8. Carbon source     | H. They remove CO <sub>2</sub> from the atmosphere.                          |
| ___ 9. Ozone             | I. Humans contribute large amounts of this gas by using fertilizers.         |
| ___ 10. Greenhouse gases | J. Livestock produce 18% of the total amount of this greenhouse gas.         |

**PART D** Each of the following questions requires a short answer.

1. Describe how forestry in British Columbia is predicted to be affected by climate change. Be sure to include at least two ways it may be affected. (2 marks).
  
  
  
  
  
  
  
  
  
  
2. How can a volcanic eruption bring colder temperatures to a region? (3 marks)

3. List three ways British Columbia has made progress in combatting global warming. (3 marks)
4. How can we use tree rings and ice cores to study climate change? (4 marks)
5. How do we measure the warming potential of a greenhouse gas? (2 marks)
6. Explain what greenhouse gases do in our atmosphere, why it is good that we have them, and why it is not good to have too much of them. (3 marks)
7. List three ways that forests may be affected by global warming. (3 marks)